UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,100	07/03/2001	Takeshi Ishida	826.1734	1690

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EXAMINER
CASIANO, ANGEL L

ART UNIT	PAPER NUMBER
2182	

DATE MAILED: 08/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/897,100	ISHIDA ET AL.
	Examiner	Art Unit	
	Angel L. Casiano	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 May 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-12</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-12</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

       1.☒ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Response to Amendment

The present Office action is in response to Amendment dated 23 May 2005.

Claims 1-12 are pending. All claims have been examined.

Priority

1.   Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Specification

2.   Previous Objection to the title has been overcome in view of the present Amendment. The new title is: SERVICE MANAGING APPARATUS FOR KEEPING SERVICE QUALITY BY AUTOMATICALLY ALLOCATING SERVERS OF LIGHT LOAD TO HEAVY TASK.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4.   The term "low level service" in claims 1, 6-10 is a relative term, which renders the claim indefinite. The term "low level" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be

reasonably appraised of the scope of the invention. Examiner respectfully submits that it is

unclear what "low level" is compared to.

5.   Claims 2-5 and 11-12 depend upon claims 1 and 10 and therefore carry the same

rejection.

6.   Regarding claims 10-12, it is unclear how the operations/functions are performed. Since

no function is specified by the word(s), it is impossible to determine the equivalents of the

element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694

(Bd. App. 1967).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
> by the manner in which the invention was made.

8.   Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lumelsky et

al. [US 6,516,350 B1] in view of Choquier et al [US 5,951,694].

Regarding claim 1, Lumelsky et al. teaches a system (see Abstract) including a program

causing an information-processing device to execute a *service managing method* ("management

of distributed resources, Abstract) accommodating a *plurality of service servers* (see "plurality of

resources", Abstract; col. 2, line 4; col. 5, lines 30-32; col. 12, lines 26-28 "service resource")

each rendering a service via a *network* (see Figures 2-3) in response to a *service request* (see col.

5, lines 33-36) from a *client* (see col. 5, lines 66-67). The reference teaches *distributing* the

service request to the plurality of service servers (see col. 5, line 31). The prior art method

teaches *managing* the plurality of service servers by dividing the service servers into a plurality

of groups of service servers depending on *quality levels* (see "performance" and "parameters",

col. 7, lines 1-10) of rendered services (see col. 5, line 65 to col. 6, line 5). In the reference, an

intermediate service resource group shifts among the plurality of groups and render a service as a

service quality of a group to which the shift is made (see col. 6, lines 1-5; "dynamic insertion or

resources", col. 7, line 9). The reference also teaches *reducing a load* on a service server within

any of the plurality of groups by using the resources of the service server with the lightest load

(see "underused resources of servers 113 and 114", col. 9, lines 8-9). The reference teaches

using this management method when the load on the *service server* within any of the plurality of

groups increases ("returning resources when rate of requests decreases", col. 9, lines 13-14), and

a *quality level* ("quality of service must be configurable, predictable, and maintainable", col. 3,

lines 47-55) to be rendered *cannot be maintained.*

However, the Lumelsky reference fails to explicitly teach a group of servers, which offer

low level service among the service servers at a normal time. Regarding this limitation,

Choquier teaches a method of redirecting a client service session, where an application server is

selected that has a relatively *low processing load* (see Abstract). This server is then used as the

service server (see col. 25, lines 50-54). At the time of the invention, one of ordinary skill in the

art would have been motivated to combine the cited disclosures in order to obtain dynamic allocation for processing user service requests (see col. 1, lines 30-33).

As for claim 2, the Lumelsky reference teaches a storage unit having information to which group (of service) the servers belong (see Figure 6, "400"; col. 9, lines 40-64).

As for claim 3, the Lumelsky reference teaches a service quality as being a response time (see col. 9, lines 11-12).

As for claim 4, Lumelsky et al. teaches recording and managing a service log (see col. 10, lines 19-26, "user profiles"). The reference also generates a schedule (see "<u>achieve</u> properties over patterns of usage", col. 7, lines 3-5). Lumelsky et al. changes the way of distributing service servers accordingly (see col. 7, lines 3-5; "<u>enforce</u> properties over patterns of usage").

As per claim 5, the Lumelsky reference teaches measuring the load for a server required to process a service request (see col. 9, lines 4-7) and shifting a server based on the load determination (see col. 9, lines 7-14).

Regarding claim 6, the combination of references teaches a **system** (see Lumelsky, Abstract) including a program causing an information-processing device to execute a *service managing method* ("management of distributed resources, Abstract) accommodating a *plurality of service servers* (see "plurality of resources", Abstract; col. 2, line 4; col. 5, lines 30-32; col.

12, lines 26-28 "service resource") each rendering a service via a *network* (see Figures 2-3) in response to a *service request* (see col. 5, lines 33-36) from a *client* (see col. 5, lines 66-67). The combination teaches *distributing* the service request to the plurality of service servers (see Lumelsky; col. 5, line 31). Therefore, the present claim is rejected under the same rationale as claim 1.

Regarding claim 7, the combination of references teaches a **system** (see Lumelsky, Abstract) including a *program* causing an information-processing device to execute a *service managing method* ("management of distributed resources, Abstract) accommodating a *plurality of service servers* (see "plurality of resources", Abstract; col. 2, line 4; col. 5, lines 30-32; col. 12, lines 26-28 "service resource") each rendering a service via a *network* (see Figures 2-3) in response to a *service request* (see col. 5, lines 33-36) from a *client* (see col. 5, lines 66-67). The combination teaches *distributing* the service request to the plurality of service servers (see col. 5, line 31). Therefore, the present claim is rejected under the same rationale as claim 1.

Regarding claim 8, the combination of references teaches a **system** (see Abstract) including a program causing an information-processing device to execute a *service managing* method ("management of distributed resources, Abstract) accommodating a *plurality of service servers* (see "plurality of resources", Abstract; col. 2, line 4; col. 5, lines 30-32; col. 12, lines 26-28 "service resource") each rendering a service via a *network* (see Figures 2-3) in response to a *service request* (see col. 5, lines 33-36) from a *client* (see col. 5, lines 66-67). The combination teaches *distributing* the service request to the plurality of service servers (see col. 5, line 31).

Therefore, the prior art combination also teaches the storage medium containing the program. The present claim is rejected under the same rationale as claim 1.

Regarding claim 9, the combination of references teaches a **system** (see Abstract) including a program causing an information-processing device to execute a *service managing method* ("management of distributed resources, Abstract) accommodating a *plurality of service servers* (see "plurality of resources", Abstract; col. 2, line 4; col. 5, lines 30-32; col. 12, lines 26-28 "service resource") each rendering a service via a *network* (see Figures 2-3) in response to a *service request* (see col. 5, lines 33-36) from a *client* (see col. 5, lines 66-67). The reference teaches *distributing* the service request to the plurality of service servers (see col. 5, line 31). The art combination also teaches a **service managing apparatus** for implementing the system of claim 1 (see Figures 4-6). Therefore, the present claim is rejected under the same rationale as claim 1.

Regarding claim 10, Lumelsky et al. teaches a system (see Abstract) having a *service managing method* ("management of distributed resources, Abstract) accommodating a *plurality of service servers* (see "plurality of resources", Abstract; col. 2, line 4; col. 5, lines 30-32; col. 12, lines 26-28 "service resource"). The prior art method teaches *managing* the plurality of service servers by dividing the service servers into a plurality of groups of service servers depending on *quality levels* (see "performance" and "parameters", col. 7, lines 1-10) of services provided (see col. 5, line 65 to col. 6, line 5). However, the Lumelsky reference fails to explicitly teach a group of servers, which offer <u>low level service</u> among the service servers at a

normal time. Regarding this limitation, Choquier teaches a method of redirecting a client service session, where an application server is selected that has a relatively *low processing load* (see Abstract). This server is then used as the service server (see col. 25, lines 50-54). At the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosures for the reasons stated above (see claim 1).

As for claim 11, Lumelsky et al. teaches an intermediate service resource group, shifting among the plurality of groups and rendering a service as a service quality of a group to which the shift is made (see col. 6, lines 1-5; "dynamic insertion or resources", col. 7, line 9). The reference also teaches *reducing a load* on a service server within any of the plurality of groups by using the resources of the service server with the lightest load (see "underused resources of servers 113 and 114", col. 9, lines 8-9).

As for claim 12, the Lumelsky reference teaches using this management method when the load on the *service server* within any of the plurality of groups increases ("returning resources when rate of requests decreases", col. 9, lines 13-14), and a *quality level* ("quality of service must be configurable, predictable, and maintainable", col. 3, lines 47-55) to be rendered *cannot be maintained*. Lumelsky also teaches *reducing a load* on a service server within any of the plurality of groups by using the resources of the service server with the lightest load (see "underused resources of servers 113 and 114", col. 9, lines 8-9).

Response to Arguments

9.   Applicant's arguments with respect to claims 1-9 have been considered but are moot in

view of the new ground(s) of rejection.

Conclusion

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action.   Accordingly, **THIS ACTION IS MADE FINAL**.   See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action.   In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this
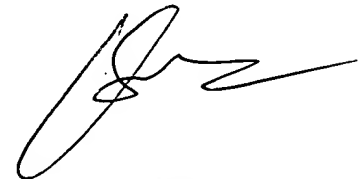
final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Angel L. Casiano whose telephone number is 571-272-4142. The

examiner can normally be reached on 9:00-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dov Popovici can be reached on 571-272-4083.   The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alc
04 August 2005

KIM HUYNH
PRIMARY EXAMINER

8/8/05